OPERATING AND MAINTENANCE INSTRUCTIONS

8" & 10" BENCH GRINDER
15-870/15-910

FEATURES

- Sealed, permanently lubricated bearings.
- Cast-iron wheel guards and dust vents.
- One-piece quick adjusting spark guards.
- Large quick adjust eye shields.
- Easy-adjust cast tool rest.
- Safety key switch.
- Fine and coarse vitrified grinding wheels included.
- Rubber foot mounts reduce vibration and prevent sliding.
- Wheel dresser included.

SPECIFICATIONS

	MODEL 15-870 M1	MODEL 15-910 M1
WHEEL SIZE	8" x 1" (203 x 25 mm)	10" x 1" (254 x 25 mm)
ARBOR SPEED	3450 RPM	1720 RPM
ARBOR SIZE	5/8" (16 mm)	1" (25 mm)
AMPERES	9.6 AMP	13.5 AMP
MOTOR	1 HP, 110 V, 1 Ph	1 1/2 HP, 110 V, 1 Ph
WEIGHT	59 LBS (27 kg)	103 LBS (47 kg)

SAFETY RULES

READ CAREFULLY BEFORE OPERATING THE MACHINE

1. Make sure that the operator has been properly trained and has read, and understands, the owners manual before operating any machinery.

2. Learn the machine's applications and it's limitations (what it can and cannot do), as well as the potential dangers that are particular to the unit. Carefully follow all operating instructions and safety guidelines.

3. Keep the work area clean and well lit.

4. Do not wear loose-fitting clothing or jewelry that may become caught in the machine or it's components, as this can lead to serious injury, including amputation. Always wear proper face, eye, ear, respiratory and body protection, suitable to the operation being performed.

5. Keep hands and other body parts well away from grinding wheels and all moving parts, or other cutting tools. Do not clear chips and grinding dust away with hands, use a brush.

6. Make sure the grinding wheels are running at full operating speed before grinding.

7. Do not force the grinding wheels or push too hard. The unit will perform better, safer and more effectively at the speed or rate for which it was designed.

8. Whenever possible use a dust collector to minimize health hazards.

9. Never leave the power on or the machine running while it is unattended.

10. Keep children away. Make sure that visitors are kept at a safe distance from the work area.

11. Use recommended speed grinding wheels, accessories, and work piece material.

12. Never stand or lean on the bench grinder. Serious injury could occur if the unit is tipped or if unintentional contact is made with its' moving parts.

13. Before starting the unit make sure the grinding wheels are securely installed and tight to the arbor shaft.

14. Keep all guards and safety devices in place and in good working order. If a guard must be removed for maintenance or cleaning make sure it is properly re-installed before using the machine again.

15. Before performing any maintenance, repairs or adjustments including wheel changes, make sure the power is off and the unit is unplugged.

16. Before plugging in and turning on the power, make sure that any adjustment tools, keys or wrenches have been removed and safely stored.

17. Always, make sure that switch is in "OFF" position before plugging in the power cord.

18. Only use accessories that are made or designed for this machine. The use of parts or accessories that are not recommended by General International will void any warranty claims and may result in injury.

19. Make sure the machine is properly grounded. This unit is supplied with a three-prong electric plug, it should be plugged into a three-pole electrical receptacle. Never remove the third prong.

20. Do not use this bench grinder for any purpose other than it's intended use. If used for other purposes, General International disclaims any real or implied warranty and holds itself harmless for any injury which may result from such use.

GENERAL ® INTERNATIONAL Warranty

All component parts of GENERAL® International machinery are carefully inspected during all stages of production and each unit is thoroughly inspected upon completion of assembly. Because of our commitment to quality, GENERAL® International agrees to repair or replace any part or parts which, upon examination, proves to be defective in either workmanship or material for a period of 24 months from date of purchase. To obtain warranty, all defective parts must be returned prepaid to GENERAL® International. Repairs made without the written consent of GENERAL® International will void all warranty.

This warranty does not apply to items that would normally be consumed or require replacement due to normal wear such as: blades, grinding wheels, lubricants, belts, electric motors and electric components.

HEAVY DUTY BENCH GRINDER

15-870 / 15-910

Thank you for choosing this **GENERAL® INTERNATIONAL** heavy duty bench grinder. This unit has been carefully tested and inspected before shipment and if properly used and maintained, will provide you with years of reliable service. To ensure optimum performance and trouble free operation a reasonable amount of care and attention is required. To get the most from your heavy duty bench grinder, please take the time to read this manual before assembling, installing and operating the unit.

UNPACKING AND CLEANUP

To ensure maximum performance from your GENERAL ® INTERNATIONAL heavy duty bench grinder, clean and assemble it carefully before use. As soon as you receive the grinder, we recommend you follow these procedures:

1. Removing all the contents from the box and compare them with the contents list.
2. Report damage or missing items if any, to your local distributor immediately.
3. Clean all rust protected surfaces with a mild solvent or kerosene. Do not use lacquer thinner; paint thinner, or gasoline as these will damage painted surfaces.
4. To prevent rust, apply a light coating of paste wax to surface.

WARNING!

NEVER CONNECT THIS UNIT TO AN OUTLET WITH A GREATER VOLTAGE THAN REQUIRED!

ATTENTION!

TO AVOID ELECTRIC SHOCK TO THE OPERATOR ALWAYS VERIFY THAT THE MACHINE IS PROPERLY GROUNDED!

ELECTRICAL REQUIREMENTS

Before connecting the machine to the power source verify that the voltage supplied corresponds to the required voltage as specified on I.D. nameplate of the machine. A power source with greater voltage than needed can result in serious injury to the user as well as damage the machine. If in doubt, contact a qualified electrician before connecting to the power source.

Never attempt to modify or repair the plug provided if it does not correspond with your outlet, contact a qualified electrician to properly install the proper outlet.

ELECTRICAL GROUNDING

In the event of a malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of electric shock to the user. This bench grinder is equipped with an electric cord having an equipment grounding conductor and 3-prong grounding plug. Connect the plug to a matching outlet that is properly installed and grounded in accordance with all local codes and ordinances.

Never modify the plug, if it does not correspond with your outlet, contact a qualified electrician in order to install the proper outlet.

Never connect the grounding-conductor to a live terminal, this can result in electric shock to the operator!

The bench grinder is intended for use on a circuit that has an outlet that looks like the one illustrated in Fig.1, A temporary adapter, which looks like Fig.2, 3 may be used to connect this plug into a 2-pole receptacle as in Fig.2.

Note: In Canada, the use of a temporary adaptor is not permitted by the Canadian Electrical Code.

The temporary adapter should only be used until a qualified electrician can install a properly grounded outlet.

GROUNDING METHODS

Fig. 1

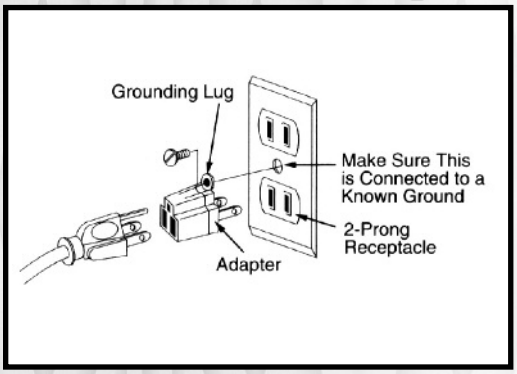


Fig. 2

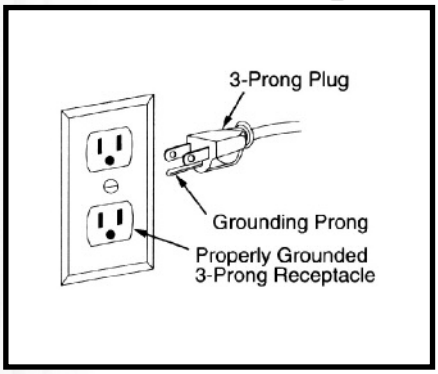
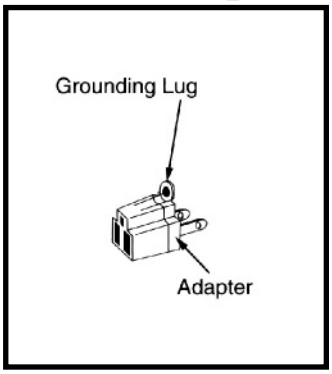


Fig. 3



The use of an extension cord is not recommended, if necessary use a three-prong extension cord and outlet, if the extension will be used outside the cord must be suitable for outdoor use (immediately replace the extension cord if worn out, cut or damaged). If in doubt contact a qualified electrician.

CAUTION!

PROLONGED GRINDING WILL CAUSE MOST MATERIALS TO HEAT UP AND MAY BURN. USE CARE WHEN HANDLING MATERIAL!

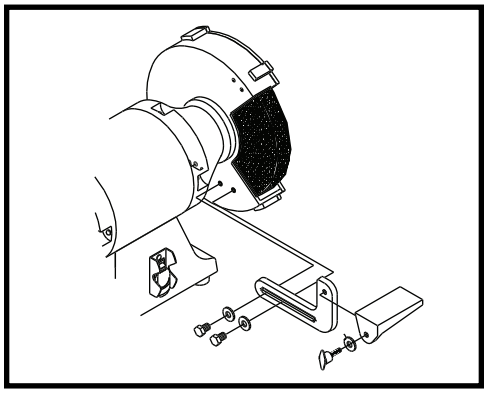
WARNING!

VERIFY THAT THE MOTOR VOLTAGE CORRESPONDS WITH YOUR POWER SOURCE OUTLET!

OPERATING THE SAFETY SWITCH

Pull out the switch paddle to turn the grinder "ON", and push it in to turn the grinder "OFF". The paddle switch can also be removed to prevent unauthorized use of the grinder. Make sure the switch is in the "OFF" position before plugging in the bench grinder.

Fig. 4



INSTALLING THE TOOL REST ATTACHMENTS

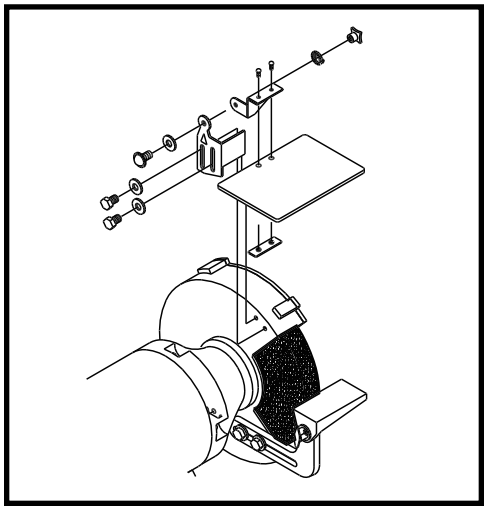
- Unplug the grinder from the power source.
- Remove the tool rests from the top portion of the foam liner and install them to the wheel guard as illustrated in Fig.4. Use the knoband washers from the hardware bag to secure them in place.

Note: There is a left and a right tool rest, refer to Fig.4 to ensure that you have installed them properly.

When grinding, the tool rests should be adjusted to within 1/8" of the grinding wheel or other accessory being used.

INSTALLING SPARK GUARDS & EYE SHIELDS

Fig. 5



Unplug the grinder from the power source. The spark guards and eye shields are included in the hardware bag included with your grinder.

The bag should contain

1	Eye shield mounting plate – right tilting	1	Eye shield mounting plate – left tilting
2	Spring washers	6	Flat washers
2	Crosshead screws W/Washers	1	Middle eye shield mounting plate – right
1	Middle eye shield mounting plate – left	2	Knobs
4	Hex bolts	4	Crosshead screws
2	Eye shields	2	Small eye shield mounting plate.

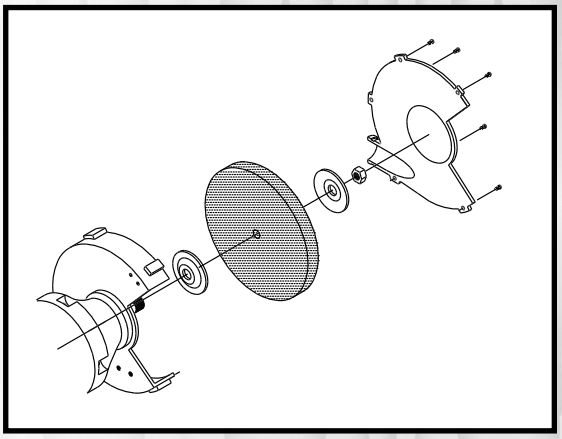
Carefully review Fig.4 and assemble one eye shield mounting rod, one eye shield mounting plate, one eye shield, and two screws.

Follow the same procedure to assemble the second eye shield assembly.

Attach both eye shield assemblies to the wheel guards at opposite ends of the bench grinder using the two hex bolts and the flat washers. (Fig. 5)

REPLACING GRINDING WHEELS

Fig. 6



Follow these procedures to remove and replace the grinding wheels.

1. Unplug the grinder from the power source.
2. Raise the eye shield out of the way.
3. Loosen and pull the tool rest out as far as possible. Do not remove completely.
4. Remove the five screws from the side of the wheel cover, and remove the wheel cover.
5. Insert a flat bladed screwdriver into the left-hand slot of the grinding motor shaft. Hold the screwdriver firmly in order to keep the shaft from turning as you loosen and remove the hex nut in the center of the grinding wheel or other accessory.

NOTE: If you are changing only the right side accessory, you do not need to remove the left wheel cover. An opening in the center of the cover permits the screwdriver to enter into the slotted shaft.

NOTE: The nut on the right side of the grinder has a standard right hand thread, turn counter-clockwise to loosen. The left-hand nut has a left-hand thread, turn clockwise to loosen.

To release the nut in the center of the grinding wheel, it may be necessary to strike the wrench sharply in the loosening direction with the heel of your hand.

6. Remove the wheel washer and wheel.
7. Inspect the wheel for any cracks, chips, or any other damage other than normal wear. If damage is found do not re-install or re-use the damaged wheel. Discard and replace a damaged wheel immediately. Verify the blotters, if blotters are damaged replace with thin cardboard or blotter paper of the same shape.

Note: Never grind without blotters on each side of the wheel.

8. Install the new wheel, verify that both wheel washers are positioned correctly (Fig.6).
9. Hold wheel and tighten the nut firmly, do not over-tighten.
10. Re-install the wheel cover and the five screws.
11. Adjust the eye shields and tighten securely.
12. Re-adjust and tighten securely your tool rest to within 1/8" from the grinding wheel or other accessory.

OPERATION INSTRUCTIONS

1. In order to prevent movement of the grinder when pressure is applied against the wheel, mounting the grinder on a flat stable surface such as a workbench is strongly recommended. If a bench is not available; Install and bolt your bench grinder to a similar solid and stable work bench or stand .
2. Note the following features: The wheel on the left is a 60 grit (for model 15-870) or 46 grit (for model 15-910) designed for medium material removal and general grinding.
3. The wheel on the right is a 36 grit (for model 15-870) or 24 grit (for model 15-910) designed for first or initial material removal.
4. To operate the bench grinder, first put on safety glasses, then switch the "On" button. Allow the bench grinder to achieve its full speed (1,720 RPM) before pressing a work piece against the grinding wheel.
5. Hold your work piece firmly against the tool rest, small work pieces must be held with pliers or other suitable clamps.
6. Feed the work smoothly and evenly into the grinding wheel. Move the work piece slowly and try to avoid jamming the work piece against the wheel. As the wheel tends to slow down you should occasionally release the pressure to let the wheel return to full speed.
7. Grinding can only be done on the face of the grinding wheel, grinding should never be done on the side of the grinding wheel unless you are equipped with a special wheel specifically made to side grind.

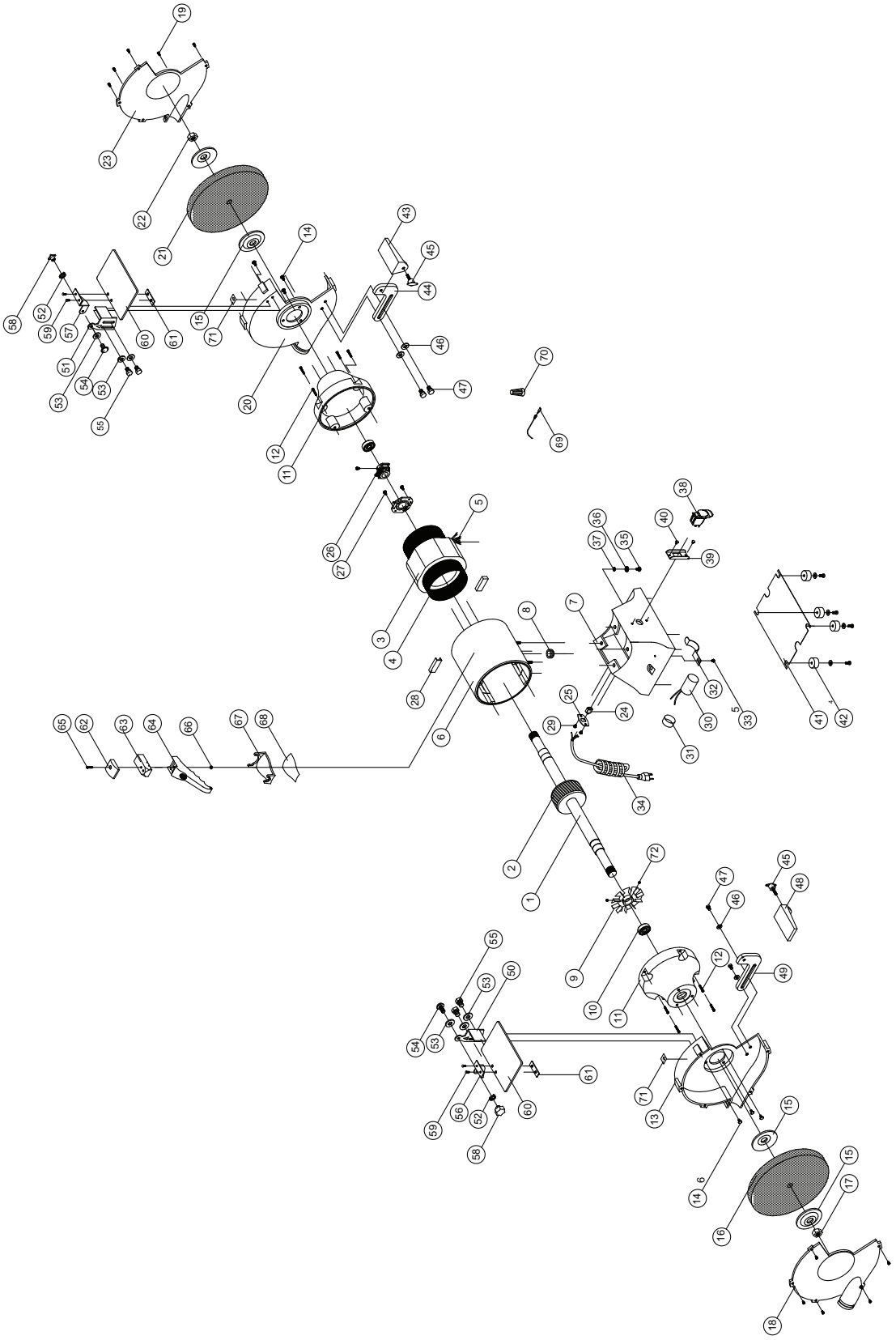
PARTS LIST
15-870

PART NO.	DESCRIPTION	SIZE	QTY
15870-01	SHAFT		1
15870-02	ROTOR		1
15870-03	STATOR		1
15870-04	COPPER WIRE		1
15870-05	WIRE		4
15870-06	MOTOR HOUSING		1
15870-07	BASE		1
15870-08	STRAIN RELIEF BUSHING		1
15870-09	MOTOR FAN		1
15870-10	BEARING	#6204ZZ	2
15870-11	MOTOR COVER-LEFT		2
15870-12	CROSS HEAD SCREW W/WASHER	3/16" x 5/8"	8
15870-13	INNER WHEEL GUARD-LEFT		1
15870-14	CROSS HEAD SCREW W/WASHER	1/4" x 1/2"	6
15870-15	WHEEL FLANGE		4
15870-16	GRINDING WHEEL #60	8" x 1" x 5/8"	1
15870-17	HEX. NUT	5/8" x 26"	1
15870-18	OUTER WHEEL GUARD-LEFT		1
15870-19	CROSS HEAD SCREW	1/4" x 1/2"	10
15870-20	INNER WHEEL GUARD-RIGHT		1
15870-21	GRINDING WHEEL #36	8" x 1" x 5/8"	1
15870-22	HEX. NUT	5/8"	1
15870-23	OUTER WHEEL GUARD-RIGHT		1
15870-24	STRAIN RELIEF BUSHING		1
15870-25	WIRE PLATE		1
15870-26	CENTRIFUGAL SWITCH		1
15870-27	CROSS HEAD SCREW W/WASHER	3/16" x 3/8"	2
15870-28	BUSHING		2
15870-29	CROSS HEAD SCREW W/WASHER	3/16" x 1/4"	2
15870-30	CAPACITOR	125V /200UF	1
15870-31	BUSHING		1
15870-32	FIXTURE CLIP	34MM	1
15870-33	CROSS HEAD SCREW W/WASHER	3/16 x 1/4"	1
15870-34	POWER CORD W/PLUG		1
15870-35	CROSS HEAD SCREW W/WASHER	3/16" x 1/4"	1

PART NO.	DESCRIPTION	SIZE	QTY
15870-36	COPPER WASHER	5MM	1
15870-37	TOOTH WASHER	M5	1
15870-38	SWITCH		1
15870-39	SWITCH PLATE		1
15870-40	CROSS HEAD SCREW W/WASHER	3/16" x 1/4"	2
15870-41	PLATE		1
15870-42	PAD W/WASHER & SCREW		4
15870-43	TOOL REST-RIGHT		1
15870-44	TOOL REST SUPPORT-RIGHT		1
15870-45	KNOB	5/16" x 1"	2
15870-46	FLAT WASHER	5/16" x 1"	4
15870-47	HEX. SCREW	5/16" x 3/4"	4
15870-48	TOOL REST-LEFT		1
15870-49	TOOL REST SUPPORT-LEFT		1
15870-50	LARGE FIXED PLATE OF EYE SHIELD-SLOPE LEFT		1
15870-51	LARGE FIXED PLATE OF EYE SHIELD-SLOPE RIGHT		1
15870-52	SPRING WASHER	1/4"	2
15870-53	FLAT WASHER	1/4" x 13 x 1T	6
15870-54	CROSS HEAD SCREW W/WASHER	1/4" x 1/2"	2
15870-55	HEX BOLT	1/4" x 3/8"	4
15870-56	MIDDLE FIXED PLATE OF EYE SHIELD-LEFT		1
15870-57	MIDDLE FIXED PLATE OF EYE SHIELD-RIGHT		1
15870-58	KNOB	1/4"	2
15870-59	CROSS HEAD SCREW	3/16" x 3/8"	4
15870-60	EYE SHIELD		2
15870-61	SMALL FIXED PLATE OF EYE SHIELD		2
15870-62	WHEEL DRESSER COVER -UPPER		1
15870-63	DRESSING STONE		1
15870-64	DRESS KNOB		1
15870-65	CROSS HEAD SCREW	3/16" x 1-1/4"	1
15870-66	HEX NUT	3/16"	1
15870-67	DRESSER FIXED SUPPORT		1
15870-68	ADHESIVE TAPE		1
15870-69	LEAD WIRE		1
15870-70	TERMINAL		2
15870-71	LABEL		1
15870-72	SET SCREW	3/16" x 1/4"	2

NOTES

15-870



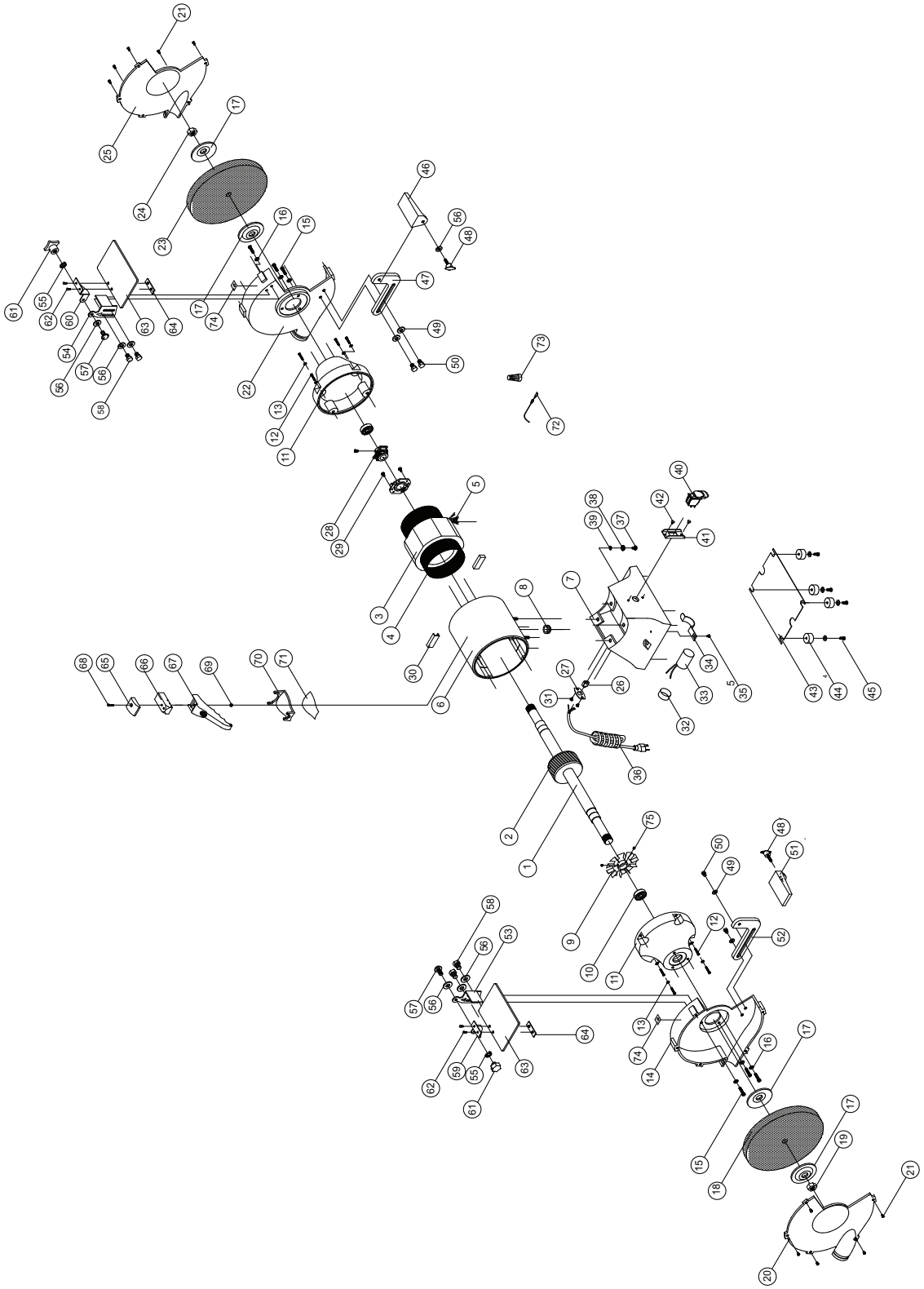
PARTS LIST
15-910

PART NO.	DESCRIPTION	SIZE	QTY
15910-01	SHAFT		1
15910-02	ROTOR		1
15910-03	STATOR		1
15910-04	COPPER WIRE		1
15910-05	WIRE		6
15910-06	MOTOR HOUSING		1
15910-07	BASE		1
15910-08	STRAIN RELIEF BUSHING		1
15910-09	MOTOR FAN		1
15910-10	BEARING	6206ZZ	2
15910-11	MOTOR COVER		2
15910-12	CROSS HEAD SCREW	1/4" x 7/8"	8
15910-13	SPRING WASHER	1/4"	8
15910-14	INNER WHEEL GUARD-LEFT		1
15910-15	CROSS HEAD SCREW	5/16" x 3/4"	6
15910-16	SPRING WASHER	5/16"	6
15910-17	WHEEL FLANGE		4
15910-18	GRINDING WHEEL #46	10" x 1" x1"	1
15910-19	HEX. NUT	1"	1
15910-20	OUTER WHEEL GUARD-LEFT		1
15910-21	CROSS HEAD SCREW	1/4" x 1/2"	10
15910-22	INNER WHEEL GUARD-RIGHT		1
15910-23	GRINDING WHEEL #24	10" x 1" x1"	1
15910-24	HEX. NUT	1"	1
15910-25	OUTER WHEEL GUARD-RIGHT		1
15910-26	STRAIN RELIEF BUSHING		1
15910-27	WIRE PLATE		1
15910-28	CENTRIFUGAL SWITCH		1
15910-29	CROSS HEAD SCREW W/WASHER	3/16" x 3/8"	2
15910-30	BUSHING		2
15910-31	CROSS HEAD SCREW W/WASHER	3/16" x 1/4"	2
15910-32	CAPACITOR BUSHING		1
15910-33	CAPACITOR	125V / 300UF	1
15910-34	FIXTURE CLIP		1
15910-35	CROSS HEAD SCREW W/WASHER	3/16" x 1/4"	1
15910-36	POWER CORD W/PLUG		1
15910-37	CROSS HEAD SCREW W/WASHER	3/16" x 1/4"	1

PART NO.	DESCRIPTION	SIZE	QTY
15910-38	COPPER WASHER		1
15910-39	TOOTH WASHER	M5	1
15910-40	SWITCH		1
15910-41	SWITCH PLATE		1
15910-42	CROSS HEAD SCREW W/WASHER	3/16" x 1/4"	2
15910-43	PLATE		1
15910-44	PAD W/WASHER & SCREW		4
15910-45	CROSS HEAD SCREW W/WASHER	1/4" x 1/2"	4
15910-46	TOOL REST-RIGHT		1
15910-47	TOOL REST SUPPORT-RIGHT		1
15910-48	KNOB	1/4"	2
15910-49	FLAT WASHER	5/16"	4
15910-50	HEX. SCREW	5/16" x 3/4"	4
15910-51	TOOL REST-LEFT		1
15910-52	TOOL REST SUPPORT-LEFT		1
15910-53	LARGE FIXED PLATE OF EYE SHIELD-SLOPE LEFT		1
15910-54	LARGE FIXED PLATE OF EYE SHIELD-SLOPE RIGHT		1
15910-55	SPRING WASHER	1/4"	2
15910-56	FLAT WASHER	1/4" x 13 x 1T	6
15910-57	CROSS HEAD SCREW W/WASHER	1/4" x 1/2"	2
15910-58	HEX BOLT	1/4" x 3/8"	4
15910-59	MIDDLE FIXED PLATE OF EYE SHIELD-LEFT		1
15910-60	MIDDLE FIXED PLATE OF EYE SHIELD-RIGHT		1
15910-61	KNOB	1/4"	2
15910-62	CROSS HEAD SCREW	3/16" x 3/8"	4
15910-63	EYE SHIELD		2
15910-64	SMALL FIXED PLATE OF EYE SHIELD		2
15910-65	WHEEL DRESSER COVER -UPPER		1
15910-66	DRESSING STONE		1
15910-67	DRESS KNOB		1
15910-68	CROSS HEAD SCREW	3/16" x 1-1/4"	1
15910-69	HEX NUT	3/16"	1
15910-70	DRESSER FIXED SUPPORT		1
15910-71	ADHESIVE TAPE		1
15910-72	LEAD WIRE		1
15910-73	TERMINAL		2
15910-74	LABEL		1
15910-75	SET SCREW	3/16" x 1/4"	2

NOTES

15-910



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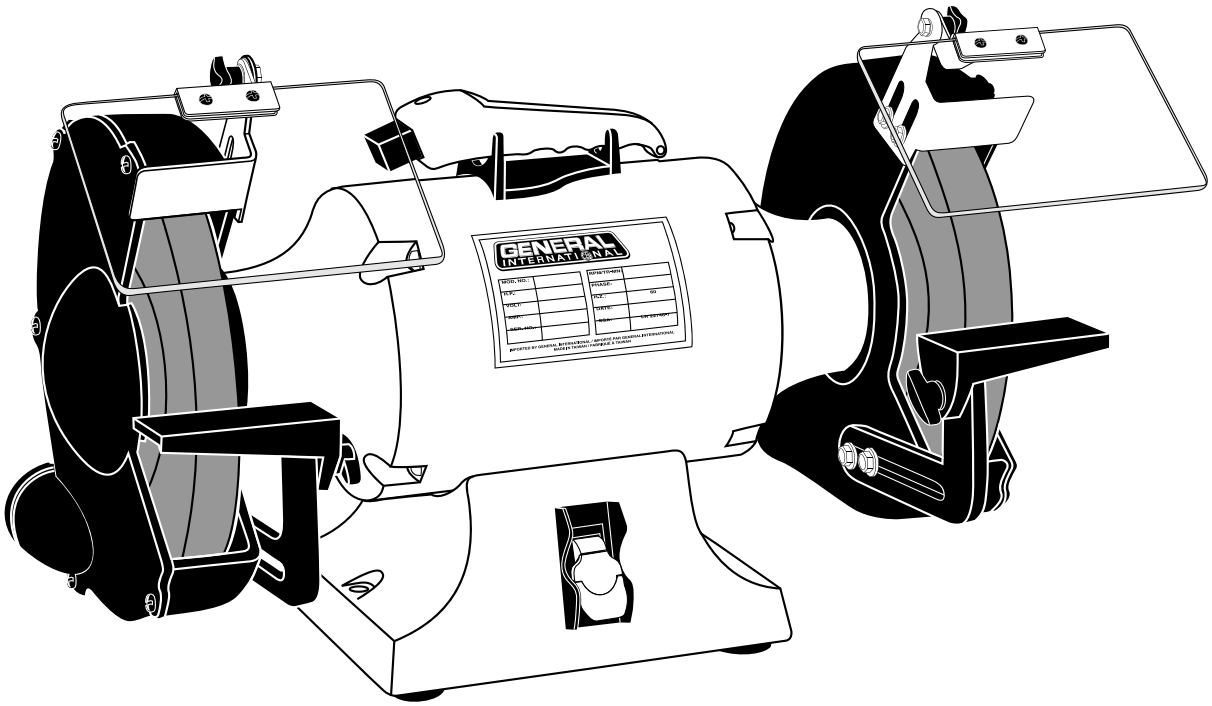

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Fax: (514) 326-5555 Order desk

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IMPORTANT: When ordering replacement parts, always give the model number, serial number of the machine and part number. Also a brief description of each item and quantity desired.